

# External Quality Assessment Schemes

## 2012



# Quality Matters in Laboratory Diagnostics and Health Care

Laboratory tests play a crucial role when a physician makes a diagnosis for a patient. In vitro diagnostic tests are having a growing impact outside traditional laboratories as point-of-care analytics make testing easier, and the availability of self-testing devices for evaluation of medical conditions is increasing. Information is also easily accessible from the Internet about different tests, test results and their interpretation. I believe this development is good, helping us as individuals to take better care of our own welfare. However, at the same time we need to be aware of the quality issues we face in pre-analytic, analytic and post-analytic phases of testing in order to draw the right conclusions from the tests and their results. The importance of right, correct and reliable information is therefore increasing. We do not want to compromise quality issues in our own lives when we are under medical tests or examinations. At least, I do not.

External Quality Assessment (EQA) is an essential tool for monitoring individual laboratory, test, instrument and reagent performance in human diagnostics. As in vitro diagnostic testing develops through scientific and technical innovations, EQA programmes need to be developed for the new tests, analytes and methods. When preparing our EQA programme for 2012, we had our 40 years' experience in EQA as groundwork, but at least as important is all the information obtained from our customer satisfaction surveys and direct feedback from our EQA scheme participants.

Labquality's work and EQA programme are built on some important foundations and details that we believe make our programme special. First of all, Labquality is a professional organization dedicated to EQA, so it is impartial and independent, which are essential issues in EQA. It is committed to the accreditation standard ISO 17043 specifically for EQA providers as well as ISO 9001 standard. Second, we have a wide network of experts for all laboratory medicine disciplines, which helps us understand specific needs and the deeper meaning of quality issues in different contexts. Participation and comments by experts in our EQA schemes give more than computerized statistics and help to focus on important

issues for improving quality, as well as meeting the required target limits. Third, Labquality's mission and vision are tightly bound to patient safety issues through the aims of its health care organization owners. Design of EQA schemes is also crucial to quality and we do not compromise on quality in our EQA schemes. Specimens in the EQA schemes are designed to mirror real patient samples, and the wide selection of analytes and flexibility of the schemes make them well suited to laboratories of different sizes. We offer a wide selection of schemes for when individual schemes are needed to meet quality requirements and consolidating them would mean compromising quality. Our programme includes all laboratory medicine disciplines as we see ourselves as partners to our clients, which can find EQA to meet all their needs in our portfolio.

Reliable statistics and understandable reports play an important role in good EQA service, and local expertise and country-specific reports give added value when providing an international service. These are examples of the key features behind Labquality's EQA programme. We believe that EQA requires high quality, a wide selection and sufficient flexibility and simplicity for use by different kinds of client. Please come and join us to develop it further.



Mauri Keinänen  
Managing Director

# EQA organizer

Labquality provides External Quality Assessment (EQA) programmes for clinical laboratories and point-of-care tests performed in social and health care units.

Labquality is an independent and impartial organization. It was founded in 1971 by the Finnish Society of Clinical Chemistry, Finnish Red Cross, Hospital League, central hospitals and some professional associations.

## Office

Labquality's office is in Helsinki, Finland.

Labquality has 30 full-time employees, and a hundred experts are involved running the quality assessment programmes. The scheme experts for each scheme are indicated in survey reports. The working groups consist of various specialists.

## Quality system

Labquality's quality system has been certified to ISO 9001:2008 standard and we are committed to the accreditation standard ISO 17043.

## Participating laboratories

Currently, about 4500 laboratories in 41 countries participate in Labquality's EQA schemes. Laboratories outside Finland are served by 17 distributors in different countries.

## International cooperation

Labquality is a member of the European Committee for External Quality Assessment Programmes in Laboratory Medicine (EQALM) and cooperates with other EQA organizers in Europe. Labquality is also a corporation member of IFCC.



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# Welcome to quality from Labquality

*Labquality's mission is to support, promote and improve quality in clinical testing, analytics and diagnostics performed in medical laboratories and other social and health care units.*

## **What are EQA Schemes?**

EQA is also called proficiency testing (PT) or inter-laboratory comparison testing. All these terms mean assessing the quality of routine measurements, but EQA emphasizes the educational mindset expected in the services.

External Quality Assessment Schemes (EQAS) are performed by an external, independent and impartial body. All participants should participate in a scheme at the recommended frequency to get the greatest benefit from it. Reports and analysis of data include objective result interpretation. The EQA scheme and the internal quality improvement system are crucial to continuous quality improvement.

Participation in EQA enables you to compare your results with other participants' results. The reports give you objective and independent assessment of the quality of your routine analyses. You also get information about methods and instruments. Participating in EQA gives you valuable information for evaluating your procedures.

## **Where can I find the Programme?**

The schemes are also presented on the Internet at [www.labquality.fi](http://www.labquality.fi).

There are in total 152 different schemes with various survey frequencies.

For further information you can contact our client services or your country distributor. Please check your distributor at our website ([www.labquality.fi](http://www.labquality.fi) -> New clients -> Distributors).

## **How do the schemes work?**

You order the surveys in which you wish to participate. You will receive the specimens and orders according to the schedule published in the Programme.

You analyse the specimens you have selected and send the results and method information to Labquality via the Internet or in writing by the deadline.

The statistical processing begins when the survey is closed. Your survey results are confidential and the reports will be available on the Internet as soon as they are completed. Most reports will also be mailed to participants.

## **What is in a report?**

Your own result is shown in a histogram or table. Most reports also include comments on the survey results by the expert.

Labquality has long experience of informative histogram printouts. A table and a histogram summarize the results from all laboratories participating in the survey. The results from participants using your method ("own group") are evaluated separately.

The reports are described in the Guidelines for statistical and graphical interpretations on Labquality's website.

## **When can I start?**

The main ordering period for the next year is in autumn, but it is possible to join the schemes during the year, subject to some limitations. Participation for the next year is guaranteed if it has been ordered before the preceding December. After your order has been registered, you will receive a confirmation of your order in which you can see the surveys that have been accepted. If you have sent your order after the start of the year, there may be limits to participation.

## **How often should I participate?**

The expert group recommends the yearly programme but it is not mandatory. You can choose one survey or more (there are exceptions: for some surveys the whole year is mandatory). The price list gives the price per survey.

## **What are the prices?**

You can get the price list from Labquality or from your distributor. Please check your country distributor at [www.labquality.fi](http://www.labquality.fi) -> New clients -> Distributors or through [info@labquality.fi](mailto:info@labquality.fi) or by phone to +358 9 8566 8200.

# Service terms 2012

## Enrolment

To ensure participation, we recommend sending orders for the whole year before the preceding December. The first shipments will start in January. Orders are also welcome during the year. Please send an order by the end of the month before the survey in question will be run. Orders are registered chronologically and Labquality reserves the right to carry an order forward to the next possible shipment if the survey in question is filled to capacity. Note that the number of participants per survey may be limited.

For direct clients of Labquality there are two options for registering for a survey:

1. An electronic order form is on Labquality's website [www.labquality.fi](http://www.labquality.fi) - Participant services. If you send your order via the Internet, please do not send any paper copies.
2. Paper order form.

The deadline for orders is the end of the preceding November.

## Mailing of specimens

Specimens are delivered from Labquality to participants by mail (EXW) or by courier taking into consideration the specimen stability or other specific needs of the shipment. A shipping and handling fee will be added to the price of each survey according to the price list. Labquality reserves the right to cancel deliveries if mailing from Finland to the destination country cannot be carried out at the required speed.

Biological substances (UN Class 3373) are marked (\*) in the Programme. They will be delivered only

- via national distributors (see the list of distributors at our website).
- if the number of participants per survey and per distributor is at least 5.

## Prices

The price includes survey specimens, the respective analyte selection specified in the Programme, one data processing per order (with a few exceptions mentioned in the Programme) and the result report. If a laboratory sends extra results for processing, they will be charged separately pro rata.

## Client code and password

Each client will be assigned a client code (laboratory ID code) that is essential in result processing, and a password for the web operations. At Labquality's website there is a Participant Services gateway. Newcomers will receive a password and client code after the order has been handled.

Using a client code and password you can, for example, order surveys, send method data and read individual result reports.

## Method data

If you participate in the General Clinical Chemistry Short-term or Long-term schemes, method data for result processing are needed in Labquality's register. Each client is responsible for notifying its method data and any corrections or changes in methods. Please send the method data via Labquality's website. For other surveys the method data are collected on the paper result forms or e-scheme forms.

## Data transmission

You may return your result forms by traditional mail, by fax or via the Internet (depending on the scheme). Electronic data transmission is available for method data, results in General Clinical Chemistry and e-schemes mentioned in the Programme.

At Labquality's website you will find electronic forms and instructions.

## Return date

The closing date of each survey is mentioned in the instruction letter and result form. The date is the deadline when the results must be at Labquality's office. Any results coming to Labquality after that date will be excluded.

## Reports

Reports are mailed to participants after each survey and also published on the Internet. E-schemes are conducted only via the Internet. A client code and password will be needed when entering the reports at the website.

## Corrective actions

A participant's own results are its own responsibility. Labquality accepts responsibility for result processing. Corrections of errors in Labquality's result processing are requested in writing within the time limit mentioned in the report of each survey. For Short-term and Long-term surveys, requests must be made in the respective month.

# www.labquality.fi

## How to access the Participant Services

A new client will receive a client code and password when the order has been registered. To be reminded of your password, please send an inquiry to Labquality's client services at [info@labquality.fi](mailto:info@labquality.fi) and give your client code, name of the laboratory, name of the contact person and email address.

## IMPORTANT

- The EQA Programme is valid for one calendar year.
- Each client should renew its own order yearly.
- The main ordering period for the following year is September - November.
- Orders coming later are welcome, but in some cases the number of participants may be limited after the yearly scheme has been started.
- Each client has an individual client code and password that is needed in order forms, result forms and website services. Please use the client code in correspondence, too.
- Result forms must be at Labquality's office at latest by the closing date mentioned in a covering letter.
- Each client is responsible for notifying its own method data and any changes or corrections in methods.
- The price mentioned in the price list includes one data processing per order (exceptions are mentioned in a programme: e.g. sample for glucose meters includes results from five glucose meters). Extra result processing will be charged.
- Requests for corrections to be included in result processing must be notified in writing within the time limit mentioned in the report of each survey. Typing errors in a result form are the client's own responsibility. Labquality accepts responsibility for result processing.
- Data processing principles are described in Guidelines for statistical and graphical interpretations, see website [www.labquality.fi](http://www.labquality.fi).

# How to return results to Labquality

## ELECTRONIC TRANSMISSION

### MS Excel result sheet for general clinical chemistry

General clinical chemistry results (serum A, Hb, CRP, bilirubin, DayTrol and LongTrol) can be sent via email by using an Excel result form. Excel result forms are available on the Internet (participant services). Email addresses to be used are included in the result forms. Labquality cannot guarantee statistical evaluation of the results if a result form is sent to any other email address of Labquality.

### Internet schemes

Labquality has several Internet schemes. These schemes are labelled as "Only via Internet" in the Programme. For these schemes there are Internet-based result forms on the Internet (Participant Services). The number of Internet schemes will increase in coming years. Participants will be informed about new Internet schemes in survey letters.

### E-schemes

There are 22 e-schemes available in Labquality's Programme. These schemes are labelled as "e-scheme" in the service catalogue. Result entry and report viewing are available only via the Internet in e-schemes. The result forms for e-schemes are available on the Internet (participant services). Please find the instructions for e-schemes on Labquality's website.

## MANUAL TRANSMISSION

### By mail

Printed result forms can be mailed to Labquality. Please send the mail early enough to be received in Labquality before the deadline of the survey. Labquality's mailing address is included in the survey letter.

### By fax

Printed result forms can be faxed to Labquality. Labquality's fax automatically sends a notification of successful transmission. Please always include your fax number in every transmission. Labquality's fax number is included in the survey letter. Please always ensure that the result form is not upside down and all necessary information is entered in the result form.

### Scanned result form as an email attachment

It is also possible to scan the result form and send it as an email attachment to Labquality. The email address is [info@labquality.fi](mailto:info@labquality.fi). Labquality cannot guarantee statistical evaluation of the results if a result form is sent to any other email address of Labquality.

## e-scheme

The schemes marked with “e-scheme” are conducted only via the Internet.

### The procedure

- Labquality sends the specimens and instruction letter to the participant.
- The participant analyses the specimens and enters the results directly into the database (using an electronic result form) on Labquality’s website.
- The closing date for results is given in the instruction letter and also seen online.
- The data processing starts after the closing date, and the outcome will be checked and approved in Labquality’s office. Within a few days the reports are available on the Internet. It is possible to print and save the report on the participant’s own computer.

### How will you benefit from it?

- You do not have to mail or send the results by fax.
- The results need not be re-entered at our office.
- The reports are available soon after the closing date on internet.
- You will receive an email message when the reports are ready. Please check that spelling of your email address is correct.
- You will have the electronic reports ready to save on your computer.

### Notes

- A computer and access to the Internet are essential.
- A participant must have a password to Labquality’s Participant Services.
- A participant should also have an email address to receive the messages.
- The results will only be recorded via the Internet. Paper forms are not used.
- The reports are available only via the Internet.

## e-schemes in 2012

### Haematology, coagulation

- 4330 APTT and Fibrinogen
- 4300 Prothrombin time
- 4386 AT, Protein C, Protein S and FVIII
- 4388 D-dimer
- 4387 LMW-Heparin/antiFXa

### Haematology, cell count

- 4100 Basic blood count, 1-level
- 4110 Basic blood count, 2-level

### Clinical chemistry

- 2610 Acid-base status and electrolytes
- 2681 Allergy [SKML]
- 2261 Haemoglobin A1c [SKML]
- 2651 Nasal swab cells
- 2226 PSA
- 3200 Urine particles
- 2652 Sputum cells

### Immunology

- 5820 Rheumatoid factor and citrullinic peptide antibodies

### Microbiology, Bacteriology

- 5050 Bacteriological staining, direct (clinical samples) digital pictures

### Microbiology, Parasitology

- 5420 Toxoplasma, antibodies

### Microbiology, Virology

- 5650 Cytomegalovirus antibodies
- 5092 Hepatitis A antibodies
- 5091 HI-virus antibodies
- 5090 Hi virus, antibodies, POC
- 5089 HTLV T-cell lymphotropic virus, antibodies

# LabScala - towards new system

In early 2010 a large IT project was started in Labquality. The new system is intended to provide an easy way to receive our clients' method change notifications, results, orders and invoices, and to issue reports and other information. The system will also provide a new working environment and more automated operations for our office staff. Our new system is called LabScala.

In the first phase we will modernize the Participant Services channel through which as a client you can manage your own user information, browse your old and new reports, and of course enter results for selected schemes. We will also change to entering an email address to log in, which will enable us pass on information about schemes or other current matters to the relevant people. As our client, you can manage your own users, since LabScala allows the setting of different levels of software user rights. Some of these functionalities will be at your disposal from the first phase onward.

We expect LabScala to shorten the turnaround time of schemes.

It will also enable us to achieve the functions required by accreditation more easily and better. In future, it will be possible to receive more versatile and even tailor-made, client-specific reports from LabScala. The functionalities of Phase I will become available to our clients during autumn 2011.

These surveys will have an electronic result feed possibility:

5080	General Bacteriology 1 (aerobes and anaerobes)
5081	General Bacteriology 2 (aerobes)
2570	Glucose meters 1
2580	Glucose meters 2: HemoCue
2300	Hormones A: Basic analytes of hormone and immunochemistry
2301	Hormones B: Steroid and peptide hormones
3100	Urine, strip tests A



**LabScala**

**Sign in with username and password**

Username:

Password:

**Sign in**

# EQA Scheme Experts

Labquality has ten area-specific working groups, which are important in planning our services. The EQA Steering Group, which is formed mainly from WG leaders, acts as an overall advisory body in EQA policy issues. Most of the WG members also work as EQA scheme experts participating in everyday operations. The scheme experts as of September 2011 are listed below.

## Andrology

Korkeela Esa  
M.D., Infertility specialist,  
Specialist in Gyn Endocrinology

## Haematology

Joutsu-Korhonen Lotta  
M.D., Ph.D., Specialist in  
Laboratory Medicine

## Haematology

Lammi Pirkko  
M.D., Specialist in Clinical  
Chemistry  
Melkko Tarja  
Adjunct Professor, Clinical  
Biochemist  
Tienhaara Anri  
M.D., Ph.D

## Haematology

Koski Tomi  
Consultant in Laboratory  
Haematology

## Immunology

Aittoniemi Janne  
MD, PhD, Specialist in Clinical  
Microbiology  
Haapala Anna-Maija  
Deputy Chief Physician  
Laurila Kaija  
M.Sc., Laboratory chief  
Mustila Anu  
Specialist in Clinical Microbiology  
and Clinical Chemistry  
Mäki Markku  
M.D., Ph.D., Professor  
Viander Markku  
M.D., Ph.D., Adjunct Professor

## Clinical Chemistry 2

Rustad Pål

## Blood Transfusion Serological Tests

## Cell Count and Cell Morphology

## Coagulation

## Diagnostics

## Short-term Clinical Chemistry

Manager, NKK (Norwegian Clinical  
Chemistry EQA Program)

## Clinical Chemistry 4

Halonen Toivo  
Linko Linnéa  
Penttilä Ilkka

## Clinical Chemistry 5

Alfthan Henrik  
Anttila Petra  
Koskinen Pertti  
Laitinen Päivi  
Lehtisaari Helena  
Turpeinen Ursula

## Clinical Chemistry 6

Anttila Petra  
Katajamäki Arto  
Penttilä Ilkka  
Åkerman Kari

## Clinical Chemistry 7

Mäki Annukka  
Pulkki Kari

## Clinical Chemistry 8

Alfthan Henrik  
Leinonen Jari

## Clinical Chemistry 9

Alfthan Henrik  
Kouri Timo

## Diabetes Analysis

Ph.D., Deputy Chief Chemist  
Adjunct Professor  
M.D., Ph.D., Emeritusprofessor

## Endocrinology

Ph.D., Clinical Biochemist  
Clinical biochemist  
M.D., Adjunct Professor,  
Chief Physician  
Chief Chemist, Adjunct Professor  
EurClinChem  
Ph.D., Adjunct Professor

## Specific Proteins

Clinical biochemist  
Chemist  
M.D., Ph.D., Emeritusprofessor  
Ph.D., Chief Chemist

## Cardiac Markers

EurClinChem  
Professor

## Tumour Markers

Ph.D., Clinical Biochemist  
Ph.D., Clinical Biochemist

## Urine Analysis

Ph.D., Clinical Biochemist  
MD, Docent, Head Physician of  
the Unit

Lillsunde Pirjo	Ph.D., Adjunct Professor, Head of Laboratory	Sarkkinen Hannu	M.D., Ph.D., Chief Physician/ Director
Malmiemi Outi	Ph.D., Clinical Biochemist	Tarkka Eveliina	Clinical Microbiologist
Väisänen Sari	Ph.D., Clinical Biochemist	Vaara Martti	Professor, Head of Division, Clinical Microbiology
Åkerman Kari	Ph.D., Chief Chemist		

### Clinical Chemistry 10

Anttila Petra	Clinical Biochemist
Horsti Juha	Ph.D., Adjunct Professor
Kofstad Johan	M.D., Chief Physician
Metso Tuula	Ph.D., Clinical Biochemist
Mättö Mikko	Clinical Chemist
Risteli Juha	Professor of Clinical Chemistry, Chief Physician
Uotila Lasse	Docent, Department Chief Physician
Åkerman Kari	Ph.D., Chief Chemist

### Instruments

Törmä Ari	Clinical Biochemist
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### Microbiology

Jarva Hanna	MD, Specialist in Clinical Microbiology
Hytönen Jukka	M.D., Ph.D.
Karttunen Riitta	Chief Physician, Adjunct professor
Puolakkainen Mirja	Adjunct Professor, Specialist in Clinical Microbiology

### Microbiology

Aittoniemi Janne-Juhana	M.D., Ph.D., Specialist in Clinical Microbiology
Hytönen Jukka	M.D., Ph.D
Kankkunen Päivi	Clinical Microbiologist
Korkeila Maija	Ph.D., Clinical Microbiologist
Koskela Markku	M.D., PhD.D., Chief Physician
Koukila-Kähkölä Pirkko	Clinical Microbiologist
Kärkkäinen Ulla	M.D., Ph.D., Specialist in Clinical Microbiology
Liimatainen Oili	Clinical Microbiologist
Linnavuori Kimmo	Chief Physician
Nevalainen Marjukka	Clinical Microbiologist
Nissinen Antti	Ph.D., Clinical Microbiologist

### Special Chemistry

### Microbiology

Lappalainen Maija
Meri Seppo
Meri Taru

### Microbiology

Brummer-Korvenkontio Henrikki
Davidkin Irja
Hukkanen Veijo
Lappalainen Maija
Loginov Raisa
Suni Jukka
Vapalahti Olli
Waris Matti
Väkevä Antti

### Pathology

Aho Heikki
Laurila Pekka
Tuominen Hannu

### Pathology

Hämäläinen Kirsi
Kati Talvinen
Laasonen Antero
Lintunen Minnamaija
Melkko Jukka
Naukkarinen Anita
Svartbäck Marcus
Väisänen Timo

### Parasitology

M.D., Ph.D., Adjunct Professor, Chief Physician
Professor of Immunology, Specialist in Clinical Microbiology
Ph.D.

### Virology

Ph.D., Senior Researcher
Ph.D.
Professor
M.D., Ph.D., Adjunct Professor, Chief Physician
Ph.D., Clinical Microbiologist
Senior Consultant, Clinical Virology
Professor
Adjunct Professor
M.D., Ph.D., Specialist in Clinical Microbiology

### Diagnostics

Chief of Department, Adjunct Professor
Adjunct Professor, M.D., Ph.D.
M.D., Ph.D., Senior Pathologist

### Technology

Deputy Chief Pathologist
Cell Biologist
Chief Medical Cell Biologist
Medical Cell Biologist
Senior Physician
Chief Medical Cell Biologist
Chief Physician
Ph.D., Clinical Cell Biologist

# EQA Services 2012

## - new schemes and other changes

# Pilot Surveys

### New schemes

5090	Hi virus, antibodies, POC <b>Four surveys per year</b>
5089	Human T-cell lymphotropic virus, antibodies <b>Four surveys per year</b>
5597	<i>Legionella</i> , antigen detection in urine <b>Four surveys per year</b>
5598	<i>Streptococcus pneumoniae</i> , antigen detection in urine <b>Four surveys per year</b>

### New frequencies

2220	Down's syndrome screening, 1st trimester <b>Now one survey per year</b>
2570	Glucose meters 1
2580	Glucose meters 2: <u>HemoCue</u> <b>Now four surveys per year</b>
5041	Gram stain, blood culture, <u>methods without carbon</u>
5042	Gram stain, blood culture, <u>methods with carbon</u> <b>Now four surveys per year</b>
4200-4201	Leucocyte differential count, 3-part, automated <b>Now four surveys per year</b>
2240	Proteins, electrophoresis <b>Now four surveys per year</b>
2226	Prostate specific antigen <b>Now four surveys per year</b>
4140, 4150-4155	Reticulocyte count, automated and manual methods <b>Now four surveys per year</b>

*The following pilot surveys are planned for 2012. For details, inquires and enrolments please contact the responsible EQA coordinator through our website ([www.labquality.fi](http://www.labquality.fi)).*

- Leucocyte differential count, HemoCue
- Norovirus, detection
- *Plasmodium falsiparum*, antigen detection
- EQA for veterinary laboratories
- EQA for human embryos


# Marks used in the programme

REF: Values measured with reference method

DEF: Values measured with definitive methods

Co: Scheme that will be arranged in cooperation with another EQA organizer

e-scheme: Results and reports only via Internet

 Accredited Schemes 2012 in accordance with ISO 17043

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## Andrology

Inquiries +358 9 8566 8200, info@labquality.fi

### 6400 **e-scheme** **Semen analysis**

Delivery October  
Specimens 2-3 videos and 2-3 series of microscopic pictures  
Examinations Concentration, morphology and motility  
Please note [A participant sends the results via Labquality's website.](#)

## Genetics

Inquiries +358 9 8566 8200, info@labquality.fi

### 3865 **Co [EQUALIS]** **DNA analysis**

Delivery 2 times /year  
Participation is not possible for less than 2 times per year  
Specimens Whole blood or extracted DNA  
Blank samples (water) are sometimes included  
Examinations DNA-Apolipoprotein E genotype  
DNA-Factor 2 (F2) g.20210G>A  
DNA-Factor 5 (F5) c.1691G>A  
DNA-Hemochromatosis (HFE) c.187C>G;  
c.845G>A  
DNA-Lactase gene (LCT) g.-13910C>T  
DNA-Methylene tetrahydrofolate reductase (MTHFR) c.677C>T; c.1298A>C

### 3840 **Molecular cytogenetics**

Delivery 1 time/year  
Specimens Lymphoid cell suspension in fixative  
Examinations Fluorescence-in-situ-hybridization (FISH) with locus- or chromosome-specific probes

### 3830 **e-scheme** **Standard cytogenetics**

Delivery 1 time/year  
Specimens Series of metaphase images of cultured, dividing lymphocytes from peripheral blood of two different individuals. The images can be exported as a .jpg file, which is a suitable file format for most of the imaging systems for karyotyping. The survey specimens are presented at Labquality's website. A participant opens the Participant services using the individual client code and password.  
Examinations Standard cytogenetic analyses in both cases. The assessment will be focused on the karyotype, report and interpretation of the results. The statement should include the case number, type of sample, the karyotype description in ISCN format, and a written geneticist's report describing the aberration(s) and its clinical significance.  
Please note [A participant sends the results via Labquality's website.](#)

## Haematology

### Blood Transfusion Serological Tests

Inquiries +358 9 8566 8200, info@labquality.fi

**4420 ABO and Rh grouping**  
Deliveries February, May, August, November  
Specimens 2 cases  
Examinations Reaction strengths and interpretation

**4460 Antibody screening and compatibility testing**  
Deliveries February, May, August, November  
Specimens 2 cases  
Examinations Antibody screening and compatibility: reaction strengths and interpretation

**4440 Antiglobulin test, direct**  
Deliveries February, May, August, November  
Specimens 2 cases  
Examinations Reaction strengths and interpretation

## Haematology

### Cell Count and Cell Morphology

Inquiries +358 9 8566 8200, info@labquality.fi

**4260 Bone marrow morphology**  
This scheme is not available in 2012.

**4100 Basic blood count, one specimen**  
**4110 Basic blood count, two specimens**  
Deliveries Monthly  
Specimens 1 blood cell suspension or 2 different blood cell suspensions  
Examinations Hb, HCT, MCH, MCHC, MCV, PLT, RBC, RDW (red cell distribution width), WBC, cumulative patient means of MCH, MCHC and MCV  
Results Results from two analysers are included in the price.  
Please note A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.

**4180 Leucocyte differential count and evaluation of blood cell morphology**

Please note that there is a separate scheme for Malaria (5460 and 5461).

Deliveries May, October  
Specimens 2–3 stained (MGG) or unstained blood smears

Further details The diagnoses will be published 5 days after the closing date on Labquality's website. The final report also includes pictures of the expected findings.

**5460 Parasites in blood, Giemsa stain**  
**5461 Parasites in blood, May-Grünwald-Giemsa stain**

Deliveries February, May, August, November  
Specimens 2 Giemsa stained smears or 2 MGG stained smears or both of them; brief case histories will be given  
Examinations Screening and identification of malaria plasmodia and other blood parasites

**Leucocyte differential count, 3-part, automated**

**4200** ABX, Advia, Cell-Dyn, Coulter, Nihon Kohden Celltac MEK

**4201** Sysmex

Deliveries March, June, September, December  
Specimens 1 blood cell suspension à 1–2 mL  
Examinations Absolute numbers of leucocytes, lymphocytes, mononuclear cells and granulocytes

Further details Results from two analysers are included in the price

**Leucocyte differential count, 5-part, automated**

**4234** ABX Pentra

**4231** Cell-Dyn

**4232** Coulter

**4235** Coulter ACT5-diff

**4236** Mindray

**4237** Nihon Kohden Celltac MEK

**4230** Siemens Advia

**4233** Sysmex XE, XS, XT

Deliveries March, June, September, December  
Specimens 1 blood cell suspension à 1–2 mL  
Examinations Leucocytes, basophils, eosinophils, granulocytes, lymphocytes and monocytes

Further details Results from two analysers are included in the price

<b>8701</b>	<p><b>e-scheme, Co [NOKLUS] Post-analytical automated haematology</b></p> <p>Delivery September</p> <p>Specimens One haematological plot, a short case history and a questionnaire available on the Internet</p> <p>Further details <u>Each laboratory is allowed to participate only with one analyser. The scheme is not suitable for Beckman Coulter analysers or any leucocyte 3-part analysers.</u></p> <p>The scheme is developed by NOKLUS and conducted only via the Internet using a specific username and password. The participants will interpret results and a plot from their main haematology instrument and a short case history will be given. The questionnaire asks e.g. if you would have trusted the results given by your instrument on the requested parameters, whether you would have reported additional parameters (not requested), whether you would have validated the results (and how) if other constituents had been requested, and how the results are reported. The participants will receive a report where they can compare their own responses to the questions from the case history with the response from other laboratories.</p>
	<b>Reticulocyte count, automated</b>
<b>4154</b>	<u>ABX Pentra</u>
<b>4151</b>	<u>Cell Dyn 4000, Sapphire</u>
<b>4155</b>	<u>Cell Dyn 3200, 3500, 3700, Ruby</u>
<b>4152</b>	<u>Coulter Gens, LH750</u>
<b>4150</b>	<u>Siemens Advia</u>
<b>4153</b>	<u>Sysmex</u>
Deliveries	March, June, September, December
Specimens	2 stabilized red blood cell suspensions à 1–2 mL
<b>4140</b>	<b>Reticulocyte count, manual methods</b>
Deliveries	March, June, September, December
Specimens	1 stabilized red blood cell suspension à 2 mL
<b>4130</b>	<b>White blood cell count: HemoCue</b>
Deliveries	March, September
Specimens	1 blood cell suspension à 2 mL
Examinations	Leucocytes
Further details	The scheme is intended for the HemoCue WBC System

## Haematology

### Coagulation

Inquiries	+358 9 8566 8200, info@labquality.fi
<b>4330</b>	<b>e-scheme Activated partial thromboplastin time and Fibrinogen</b>
Deliveries	February, May, August, November
Specimens	2 lyophilized plasmas à 0.5–1 mL
Examinations	Coagulation time in seconds, fibrinogen
Please note	<u>A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.</u>
<b>4388</b>	<b>e-scheme D-dimer</b>
Deliveries	February, May, August, November
Specimens	2 serum specimens à ~ 1 mL
Please note	<u>A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.</u>
<b>4387</b>	<b>e-scheme LMW-Heparin/antiFXa</b>
Deliveries	February, May, August, November
Specimens	2 lyophilized plasmas à 0.5–1 mL
Please note	<u>A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.</u>
<b>4300</b>	<b>e-scheme Prothrombin time</b> (Thromboplastin time)
Deliveries	February, May, August, November
Specimens	2 lyophilized plasmas à 0.5–1.5 mL
Examinations	Coagulation in INR units
Please note	<u>A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.</u>
<b>4386</b>	<b>e-scheme Special coagulation</b>
Deliveries	February, May, August, November
Specimens	2 lyophilized plasmas à 0.5–1.5 mL
Examinations	Antithrombin, Factor VIII, Protein C, Protein S
Please note	<u>A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.</u>

Inquiries +358 9 8566 8200, info@labquality.fi

Preliminary results are available at Labquality's website in 2–5 working days after the closing date.

**5935 ANCA and GbmAb**  
(Anti-neutrophilic cytoplasmic antibodies and Glomerular basement membrane antibodies)

**Deliveries** February, August  
**Specimens** 2 liquid human sera or plasma à ~0.5 mL  
**Examinations** Anti-neutrophilic cytoplasmic antibodies, Myeloperoxidase antibodies, Proteinase-3 antibodies and Glomerular basement membrane antibodies

**5900 Antinuclear antibodies**  
(Extractable antinuclear antigens and double-stranded deoxyribonucleic acid are included)

**Deliveries** April, October  
**Specimens** 3 liquid human sera or plasma à ~0.6 mL  
**Examinations** ANA, ENAAb, RNPAAb, SmAb, SSAAb, SSBAb, Scl70Ab, CentAb, Jo1Ab, DNAnAb (dsDNA), HistAb

**5940 Coeliac disease, antibodies**

**Deliveries** February, June, October  
**Specimens** 2 liquid human sera or plasma à ~0.7 mL  
**Examinations** Gliadin antibodies, endomysium antibodies, tissue transglutaminase antibodies, demiadated gliadin peptide antibodies.  
**Please note** Survey is not suitable for POC tests

**5930 Liver disease and autoimmune gastritis serology**

**Deliveries** May, November  
**Specimens** 2 liquid human sera or plasma à ~0.4 mL  
**Examinations** Liver kidney microsomal antibody, Smooth muscle antibody, Mitochondrial antibody, Gastric parietal cell antibody

**5937 Phospholipid antibodies**

**Delivery** May  
**Specimens** 2 liquid human sera or plasma à ~0.5 mL  
**Examinations** Phospholipid antibody, Cardiolipin antibody (IgG and IgM), β2Glycoprotein antibody (IgG)

**e-scheme**

**5820 Rheumatoid factor and citrullic peptide antibodies**

**Deliveries** January, April, July, October  
**Specimens** 2 liquid human sera or plasma à ~0.7 mL  
**Examinations** Qualitative and quantitative RF, cyclic citrullinated peptide antibodies  
**Please note** A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

**5920 Thyroid gland antibodies**

**Deliveries** March, June, October  
**Specimens** 2 liquid human sera or plasma à ~0.4 mL  
**Examinations** Thyroglobulin antibodies and thyroid peroxidase antibodies

**5913 Thyroid stimulating hormone receptor, antibodies**

**Delivery** March, September  
**Specimens** 1 liquid human sera à ~0.4 mL  
**Examinations** Thyroid stimulating hormone receptor antibodies

# Clinical Chemistry 1

## Long-term Clinical Chemistry

Inquiries +358 9 8566 8200, info@labquality.fi

Labquality has two different programmes for laboratories' external quality control in general clinical chemistry:

1. Clinical chemistry (Long-term) where target values are stated
2. Clinical chemistry (Short-term) with unknown concentrations.

### Clinical chemistry (Long-term)

The scheme is designed for monitoring the continuing performance of your laboratory from month to month during a year. The same serum is used daily, weekly or monthly. The target values are stated (see also www.Labquality.fi - EQA Schemes - General clinical chemistry). Results are processed monthly.

Long-term visual reports (see Picture 1) will enable you to assess the acceptability of the internal variation and performance of methods in your laboratory in comparison with your method group and all others. External long-term quality assessment supports the internal quality assurance of your laboratory. Analytical performance marked with CV 50 % and CV 90 % in the report provide means to evaluate your laboratory's internal variance and indicate quality criteria.

### How to order and use the long-term samples

The minimum order is 10 vials per year. The statistical processing of results is included in the price. A laboratory can report one single result (no averages) per day for the laboratory's analyte selection. The analytes are presented in Table 1 on page 21.

### Which long-term serum to choose?

You can use human serum (DayTrol) or bovine serum (LongTrol) in general clinical chemistry EQA depending on the analyte selection of your laboratory. The analyte selection in human serum is wider including for example immunochemistry.



1031

### DayTrol, human serum

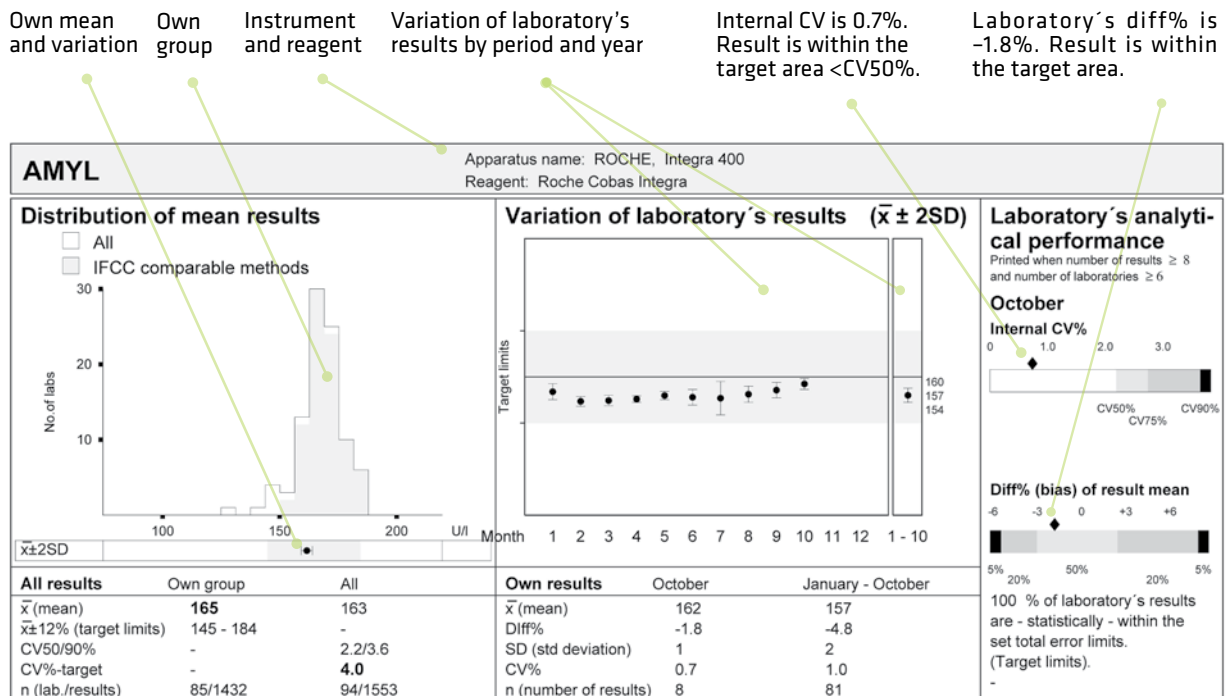
Delivery Minimum order is 10 bottles per year  
 Specimen Human serum, lyophilized, à 5 mL  
 Examinations See Table 1 on page 20  
 Monthly result processing is included



1011

### LongTrol, bovine serum

Delivery Minimum order is 10 bottles per year  
 Specimen Bovine serum, lyophilized, à 10 mL  
 Examinations See Table 1 on page 20  
 Monthly result processing is included



Picture 1. The long-term schemes are designed for monitoring the continuing performance of laboratory from month to month during a year. A participant can choose human DayTrol or bovine LongTrol. Target values are stated for both sera.

# Clinical Chemistry 2

## Short-term Clinical Chemistry

Inquiries +358 9 8566 8200, info@labquality.fi

Survey specimens are human material of unknown concentrations analysed and reported monthly. A laboratory analyses the samples according to its own analyte selection and sends the results to Labquality for statistical processing. It is possible to complement the analyte selection with Neonatal bilirubin, CRP and Haemoglobin. The results are processed together.

### The short-term specimens are mailed four times per year:

1. January (specimens for January and February)
2. March (specimens for March and April)
3. May (specimens for May, June, July and August)
4. September (specimens for September, October, November and December)

Each participant analyses the specimens in the second-last week of the respective month and returns the results immediately to Labquality.

The deadlines for sending results to Labquality are presented on our website.



### +1072 Serum A

- Deliveries 4 times per year:
1. January and February
  2. March and April
  3. May, June, July and August
  4. September, October, November and December

Specimen Liquid or lyophilized sera à 3–5 mL per month  
 Examinations See page 21, Table 1.  
 Specimens are selected to cover a wide concentration range.  
 Monthly result processing is included.



### +2040 Bilirubin, neonatal

- Deliveries 4 times per year:
1. January and February
  2. March and April
  3. May, June, July and August
  4. September, October, November and December

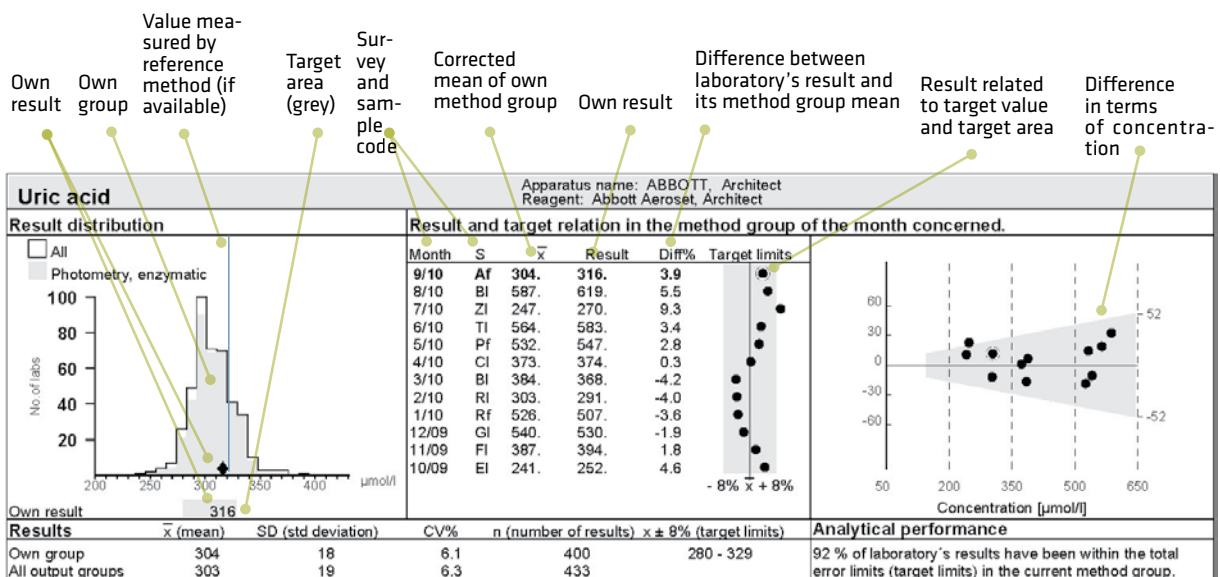
Specimen 1 specimen per month  
 Examination Bil, neo  
 Monthly result processing is included.



### +2020 C-reactive protein

- Deliveries 4 times per year:
1. January and February
  2. March and April
  3. May, June, July and August
  4. September, October, November and December

Specimen 1 liquid serum per month  
 Examination CRP, quantitative methods  
 Monthly result processing is included.



Picture 2. General chemistry Serum A samples are human sera of unknown concentrations analysed and reported monthly. Results are presented in SI units. Other units are available by agreement.

**+1001** **Haemoglobin**  
(10-12 times per year)

**+1002** **Haemoglobin**  
(less than 10 times per year)

Deliveries 4 times per year:  
 1. January and February  
 2. March and April  
 3. May, June, July and August  
 4. September, October, November and December

Specimen 1 specimen per month  
 Examination Haemoglobin  
 Monthly result processing is included.

**2050** **Serum B and C (2-level)**

Using two-level sera (serum B and C) a laboratory can monitor the accuracy of two different concentrations at the same time. Results are presented in histograms and a Youden plot (Picture 3).

Deliveries February, March, June, September, October, November

Specimen Two liquid human sera à 3–5 mL

Examinations See Table 1 on page 21

Further details Specimens are selected to cover a wide concentration range for most of the analytes. Reference values for common analytes will be included.  
 Suitable also for Vitros analyzers

### Statistical parameters of Serum B and C (2-level)

X	Corrected mean	Max	The largest accepted result in the method group
med	Median	Excluded	Results that are manually deleted before the calculation
s	Corrected standard deviation	Outliers	The number of outliers found by the calculation (ISO13528)
CV%	Coefficient of variation	Number	Number of laboratories
SEM	Standard error of the mean		
Min	The smallest accepted result in the method group		

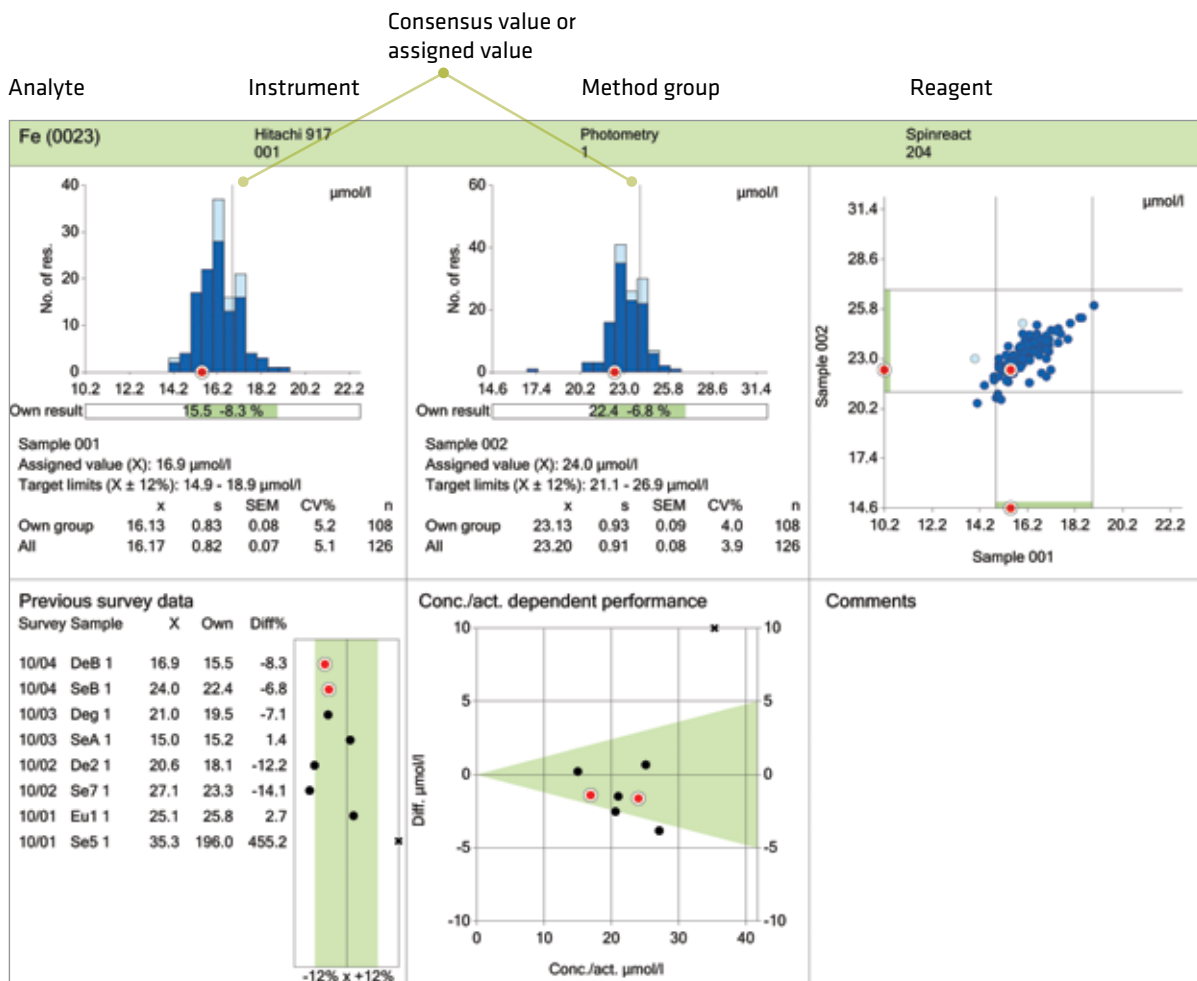


Table 1. Analytes included in Long-term and Short-term clinical chemistry

	Short-term		Long-term	
	Serum A, B, C	Hb, Bilirubin, CRP	LongTrol®, (10 ml) bovine	DayTrol®, (5 ml) human
Alanine aminotransferase	◆		◆	◆
Albumin	◆			◆
Alkaline phosphatase	◆		◆	◆
Alpha-1-antitrypsin	◆			
Alpha-1-glycoprotein	◆			
Amylase	◆		◆	◆
Amylase, pancreatic	◆			
Aspartate aminotransferase	◆		◆	◆
Bilirubin	◆		◆	◆
Bilirubin, neonatal		◆		
C-reactive protein		◆		
Calcium	◆		◆	◆
Calcium, ionized, actual	◆			
Calcium, ionized, pH 7.4	◆			
Chloride	◆		◆	◆
Cholesterol	◆		◆	◆
Cholesterol, HDL	◆			◆
Cholesterol, LDL	◆			
Copper	◆			
Cortisol	◆			
Creatine phosphokinase	◆		◆	◆
Creatinine	◆		◆	◆
Ferritin	◆			
Gamma-glutamyltransferase	◆		◆	◆
Glucose	◆		◆	◆
Haemoglobin		◆		
Haptoglobin	◆			
Immunoglobulin A	◆			
Immunoglobulin E	◆			
Immunoglobulin G	◆			
Immunoglobulin M	◆			
Iron	◆		◆	◆
Lactate	◆		◆	◆
Lactate dehydrogenase	◆		◆	◆
Lithium**	◆		◆	◆
Magnesium	◆		◆	◆
Orosomuroid	◆			
Osmolality	◆		◆	◆
Phosphorus	◆		◆	◆
Potassium	◆		◆	◆
Protein	◆		◆	◆
Selenium	◆			
Sodium	◆		◆	◆
Thyreotropin	◆			◆
Thyroxine	◆		◆	◆
Thyroxine, free	◆			◆
TIBC	◆			
Transferrin	◆			◆
Transferrin receptor	◆			◆
Triglycerides	◆		◆	◆
Triiodothyronine	◆			
Urea	◆		◆	◆
Uric acid	◆		◆	◆
Zinc	◆			

\*\* Lithium can be absent in some two-level short-term sera

### Please note!

For POC chemistry and small dry chemistry analysers we recommend Basic Chemistry scheme (2100 on page 27).

### Make use of our website:

Send the general clinical chemistry results via the Internet. Please take a closer look at the Excel forms that can be downloaded to your own computer.

- [www.labquality.fi](http://www.labquality.fi)
  - > Participant services
  - > Results forms for general clinical chemistry
- Look at your general clinical chemistry result reports via the Internet
  - > Participant services
  - > Laboratory-specific reports

## Clinical Chemistry 3

### Allergology

Inquiries +358 9 8566 8200, info@labquality.fi

#### 2670 **Co [UK NEQAS]** **Allergy in vitro diagnostics**

Please note We can guarantee participation only for laboratories that have ordered the survey by the end of preceding November. Late orders cannot be accepted. The email address of your contact person is obligatory.

Deliveries February, April, June, August, October, November

Specimens 2 human sera for specific IgE à 0.5 mL, 4 allergens in each specimen  
1 serum for total IgE à 0.5 mL

Examinations Total IgE and specific IgEs; allergens will be announced later

Further details Participation is not possible for less than 6 times per year. From the beginning of 2010 the specific IgE results has been reported via the Internet direct to UK NEQAS webpages (for this reason we need your email address) and the reports will be also available via these pages. We will send from Labquality only the total IgE reports in connection with Eosinophil cationic protein reports.  
See also 2680 Eosinophil cationic protein.

#### 2681 **e-scheme CO [SKML]** **Allergy in vitro diagnostics**

Please note We can guarantee participation only for laboratories that have ordered the survey by the end of preceding November.

Delivery All samples will be sent in February for current year. Result processing is in February, May, August and November.

Specimens 3 human sera (à 0.5 mL) for 4 specific IgE allergens and total IgE

Examinations Total IgE and specific IgEs; allergens will be announced later

Further details In cooperation with SKML. Participation is not possible for less than 4 times per year. We can guarantee participation only for laboratories that have ordered the survey by the end of preceding November.

**2680 Eosinophil cationic protein**  
Deliveries February, April, June, August, October, November  
Specimens 1 serum à 0.3 mL in connection with allergy survey (2670)  
Examination ECP  
Results are processed in connection with total IgE results in survey 2670 (UK NEQAS allergy).

## Clinical Chemistry 4

### Diabetes Analysis

Inquiries +358 9 8566 8200, info@labquality.fi

**2570 Glucose meters 1**  
**2580 Glucose meters 2:** HemoCue  
Deliveries February, May, August, November  
Specimens 1 whole blood or serum  
Examination Glucose  
Please note The price includes result processing for five glucose meters. If more are needed, please order extra samples.

**1261 Haemoglobin A1c**  
Please note Not suitable for Afinion instrument  
Deliveries February, April, June, August, October  
Specimens 2 lyophilized blood samples à 0.5 mL  
Examination HbA1c  
Result processing in IFCC and DCCT units

**2261 e-scheme Ref CO [ERL]**  
**Haemoglobin A1c**  
Please note Orders by latest at the end of preceding December.  
Delivery 24 samples distributed in January.  
Examinations Analyses and result processing fortnightly  
Online results via Internet

**2262 Haemoglobin A1c, haemoglobin variants**  
Deliveries April, November  
Specimens 1 lyophilized blood sample

## Clinical Chemistry 5

### Endocrinology

Inquiries +358 9 8566 8200, info@labquality.fi

#### 2220 Down's syndrome screening, 1st trimester

Deliveries July  
Specimens 2 human sera

Further details In the Down's syndrome screening scheme laboratories will determine PAPP-A (pregnancy associated protein) and free beta hCG concentrations from the samples. The Down's syndrome risk assessment is determined based on laboratory results and information on pregnancy (e.g. pregnancy weeks and NT thickness).



#### 2300 Hormones A: Basic analytes of hormone and immunochemistry

#### 1300 Extra set of samples A

Deliveries February, April, May, June, August, October, November, December  
Specimens 2 human sera à 3 mL  
Examinations Digoxin, ferritin, folate, hCG (total, intact), T3, free T3, T4, free T4, TSH, vitamin B12



#### 2301 Hormones B: Steroid and peptide hormones

#### 1301 Extra set of samples B

Deliveries February, April, June, August, October, December  
Specimens 2 human sera à 3 mL. Liquid serum (one level) will be included in April, August and December surveys.  
Examinations Androstenedione, aldosterone, C-peptide, cortisol, DHEAS, estradiol, FSH, gastrin, growth hormone, IGF-1, insulin, LH, progesterone, 17-OH-progesterone, prolactin, SHBG, testosterone, free. testosterone, TBG  
Please note Reference values for 1 analyte in liquid sera, further information on analytes will be given later.

#### 2250 Parathyroid hormone

Deliveries March, October  
Specimens 2 lyophilized human sera à 1 mL  
Examination PTH

## Clinical Chemistry 6

### Specific Proteins

Inquiries +358 9 8566 8200, info@labquality.fi



#### 2132 C-reactive protein (CRP), quantitative methods

Deliveries February, June, September, November  
Specimens 2 human sera à 1 mL  
Examination CRP



#### 2131 C-reactive protein (CRP), semi-quantitative methods, visual reading

Deliveries February, June, September, November  
Specimens 2 human sera à 1 mL  
Examination CRP, semi-quantitative method

#### Co [EQUALIS]

#### 2140 Decalotransferrin

Deliveries 6 times / year  
Specimens 2 human plasma with varying concentrations of CDT  
Please note Participation is not possible for less than 6 times per year

#### 2200 Lipids and lipoproteins

#### 2202 Lp(a)

Deliveries February, September  
Specimens 2 fresh human sera à 0.5–1 mL  
Examinations Cholesterol, HDL cholesterol, LDL cholesterol, lipoprotein apo A1, lipoprotein apo A2, lipoprotein apo B, lipoprotein (a), triglycerides  
Please note Separate specimen for Lp(a)

#### 2160 Proteins in cerebrospinal fluid

Deliveries April, September  
Specimens 1 cerebrospinal fluid à 1.8 mL, 1 human serum à 1 mL  
Examinations **Cerebrospinal fluid:** Albumin, IgG, Total protein, IgG index  
**Serum:** Albumin, IgG

## 2240 Proteins, electrophoresis

Deliveries February, May, August, November  
Specimens 2 human sera à 0.5 - 1 mL  
Examinations Electrophoresis, contains immunofixation

## 2230 Proteins, immunochemical determinations

Deliveries January, April, June, September  
Specimens 2 human sera à 1 mL  
Examinations Alpha-1-antitrypsin, alpha-2-macroglobulin, albumin, ceruloplasmin, complement C3, complement C4, haptoglobin, hemopexin, IgA, IgG, IgLc-Kappa, IgLcLambda, IgLcKappa free, IgLcLambda free, IgM, orosomuroid, pre-albumin, RBP, transferrin, transferrin receptor

# Clinical Chemistry 7

## Cardiac Markers

Inquiries +358 9 8566 8200, info@labquality.fi

## 2690 Natriuretic peptides 1, B-type, NT-ProBNP

Also suitable for Roche Cardiac Reader and cobas h232

Deliveries January, April, July, October  
Specimens 2 lyophilized or liquid specimens à 1–2 mL  
Examinations NT-ProBNP

## 2691 Natriuretic peptides 2, B-type, BNP

Deliveries January, April, July, October  
Specimens 2 lyophilized or liquid specimens à 1–2 mL  
Examinations BNP

## 2540 Myocardial markers 2541 Myocardial markers and CRP, low concentration

Deliveries February, April, June, September, November  
Specimens 2 fresh human specimens à 0.5–1 mL; CRP: 1 serum à 1 mL  
Examinations CK, CK MB mass, LD, myoglobin, quantitative troponin I, quantitative troponin T and CRP low concentration. See also detection of troponin I and T.

## 2530 Troponin I and troponin T, detection (qualitative test)

Deliveries February, April, June, September, November  
Specimens 2 fresh human specimens à 0.5 mL  
Examinations Detection of Troponin I and Troponin T. Quantitative results are accepted only if measured using POC chemistry.



## Clinical Chemistry 8

### Tumour Markers

Inquiries +358 9 8566 8200, info@labquality.fi

**2226** **e-scheme**  
**Prostate specific antigen**

Deliveries January, April, July, October  
Specimens 2 liquid human sera à 1 mL  
Examinations PSA and PSA free, PSA free/total index  
Please note A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.

**2700** **Tumour markers**  
**2701** **Extra set of samples**

Deliveries February, May, August, November  
Specimens 2 liquid human sera à 2 mL  
Examinations AFP, CA125, CA 153, CA 199, CEA, ferritin, hCG (total, intact, beta-subunit), PSA, PSA free/total index, TG, TG antibodies, beta-2-microglobulin, Anti-Mullerian hormone and NSE

## Clinical Chemistry 9

### Urine Analysis

Inquiries +358 9 8566 8200, info@labquality.fi

**3240** **Albumin and creatinine in urine**

Only for quantitative analyses

Deliveries April, October  
Specimens 2 human urine specimens with spiked albumin and creatinine, à 4 mL  
Examinations Albumin, creatinine and albumin-creatinine index

**3300** **Drug abuse screening in urine**

**3305** **Drug abuse screening and confirmation in urine**

**3310** **Additional volume (2 x 5 mL)**

Deliveries February, June, September  
Specimens **Screening:**  
2 authentic samples à 5 mL  
Additional volume à 2 x 5 mL on request. See the price list.  
**Screening and confirmation:**  
2 authentic samples à 5 mL plus 2 x 5 mL for confirmation. Additional volume à 2 x 5 mL on request. See the price list.  
Examinations Amphetamines, barbiturates, benzodiazepines, buprenorphine, cannabinoids, cocaine metabolites, gamma-hydroxybutyrate, methadone metabolites, opiates, phencyclidine, propoxyphene

**3270** **Pregnancy test**

Deliveries March, May, September, November  
Specimens 2 fresh urine samples à 1 mL  
Examinations Qualitative hCG

**3200** **e-scheme**  
**Urine, identification of cells and other particles** (digital pictures)

**3201** **Paper prints only in connection with 3200**  
 (Extra price, please see the price list)

Deliveries February, May, August, November  
 Specimens 4 digital pictures on Labquality's website.

Please note A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.

**3160** **Urine, quantitative chemistry**

Deliveries March, May, September, December  
 Specimens 1 lyophilized or liquid urine à 8-10 mL  
 Examinations Albumin, amylase, calcium, chloride, creatinine, glucose, magnesium, osmolality, pH, phosphorus, potassium, protein, sodium, specific gravity, urea, uric acid

**3100** **Urine, strip tests A**

Deliveries February, April, August, October  
 Specimens 1 lyophilized urine à 15 mL. There will be 2-3 different sample levels during the year.

Examinations Glucose, ketones, leukocytes, nitrite, pH, protein, blood

**3130** **Urine, strip tests B, particle count and estimation of density**

Deliveries March, May, September, December  
 Specimens 1 lyophilized or liquid urine à 12-15 mL  
 Examinations Particle count: erythrocytes and leukocytes  
Estimation of density: creatinine, specific gravity and osmolality  
Strip tests: glucose, ketones, leukocytes, nitrite, pH, protein, blood

Please note The arbitrary concentrations of the obtained strip test results will only be collected in order to avoid different groupings of positive categories used by different strip tests and user laboratories.

## Clinical Chemistry 10

### Special Chemistry

Inquiries +358 9 8566 8200, info@labquality.fi

**2610** **e-scheme**  
**Acid-base status and electrolytes**

Deliveries February, April, August, November  
 Specimens 3 buffered artificial specimens à 2.5 mL. Please order separate set for each analyser.

Examinations Chloride, creatinine, glucose, ionized calcium, ionized magnesium, lactate, pCO<sub>2</sub>, pH, pO<sub>2</sub>, potassium, sodium, urea

Please note A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.

**Alcohol in blood or serum**  
 For clinical and forensic laboratories

**2510** **Ethanol + Methanol + Isopropanol in whole blood**

**2511** **Ethanol + Methanol + Isopropanol in serum**

**2516** **Ethylene glycol in whole blood**

**2517** **Ethylene glycol in serum**

Deliveries March, October  
 Specimens **Ethanol:** 2-level specimens, whole blood or serum  
**Ethylene glycol, methanol and isopropanol:** 1-level specimens, whole blood or serum

**2105** **Ammonium ion**

Deliveries April, August, December  
 Specimens 2 buffered or serum based specimen

**2210** **Angiotensin convertase (ACE)**

Delivery May  
 Specimens 2 human sera

**2100 Basic chemistry, POC analysers**  
Only for dry chemistry analysers

Deliveries February, May, August, November  
Specimens 2 human sera à 1 mL  
Examinations Alanine aminotransferase, albumin, alkaline phosphatase, amylase (total and pancreatic), aspartate amino-transferase, calcium, chloride, HDL cholesterol, cholesterol, creatine kinase, creatinine, gamma glutamyl-transferase, glucose, lactate dehydro-genase, magnesium, phosphorus, potassium, sodium, total protein, triglycerides, urea and uric acid

**2106 Beta-hydroxybutyrate**

Delivery December  
Specimens 2 human sera à 0.5 mL

**2520 Bile acids**

Delivery November  
Specimens 2 pooled human sera à 0.5 mL

**2110 Bilirubin**

Also suitable for linearity measurements for bilirubinometers and acid-base status analysers

Delivery March  
Specimens 3 liquid specimens. Please order separate set for each analyser.  
Examination Total bilirubin

**2109 Bilirubin, conjugated**

Delivery October  
Specimens 2 lyophilized or liquid specimens  
Examination Total bilirubin, conjugated bilirubin

**Co [NKK] Chromogranin A**

Delivery November  
Specimens 3 genuine samples of human sera  
Please note The samples are sent by air mail on dry ice. As a feedback the laboratory will receive a report that shows the results for all the participants in the scheme (anonymized) together with some indicators on precision, trueness and linearity (with dilution).

**8805 Co [DEKS] Cystatin C**

Deliveries November  
Specimens 2 human plasmas  
Please note Participation is not possible for less than 2 times per year



**2730 Erythrocyte sedimentation rate**  
**2731 Erythrocyte sedimentation rate:**

Alifax; Greiner Tubes

**2732 Erythrocyte sedimentation rate:**  
Alifax; Sarstedt tubes

Deliveries March, May, September, November  
Specimens 2730: 1 artificial blood cell suspension à 8.5 mL  
2731 [Alifax]: 3-level specimen set à 3 mL  
2732 [Alifax]: 3-level specimen set à 3 mL

Examination ESR  
Please note The price includes result processing for three devices (one result / device / sample). If more are needed, please order extra samples.

**2750 Faecal occult blood**

Deliveries January, May, September, November  
Specimens 2 preparations à 0.5 mL that include human haemoglobin  
Examination Detection of haemoglobin

**2370 Folate, erythrocytes**

Will be delivered only in Nordic countries


Delivery April  
Specimens 1 human whole blood sample à 1 mL  
Examinations Blood folate and erythrocyte folate  
Please note The sample must be handled (= haemolysed) within 3 days from the mailing



**2114 Haemoglobin, 1-level**  
For POC instruments only

Deliveries March, May, September, November  
Specimens 1 specimen à 1 mL  
Examination Haemoglobin

<b>2112</b>	<b>Haemoglobin, 3-level samples, For POC instruments only</b>
Delivery	September
Specimens	3 specimens à 1 mL (low, medium and high concentration)
Examination	Haemoglobin linearity with three specimens. Results for three instruments are included in the price.
	<b>Ref</b>
<b>2113</b>	<b>Haemoglobin, 3-level samples, Cell counters and analysers</b>
Delivery	September
Specimens	3 specimens à 1 mL (low, medium and high concentration)
Examination	Haemoglobin linearity with three specimens. Reference values will be given in a summary report. Price includes result processing for one device.
<b>2150</b>	<b>Haemoxymeters</b>
Deliveries	March, September
Specimens	2 samples à 0.5 mL. Please order separate set for each analyser.
Examinations	FO2Hb, FCOHb, FMetHb, cHb, sO2
	<b>Co [DEKS]</b>
<b>8816</b>	<b>Homocystein</b>
Deliveries	6 times/year
Specimens	2 human sera or plasmas
Please note	<u>Participation is not possible for less than 6 times per year</u>
	<b>Co [DEKS]</b>
<b>8815</b>	<b>Methyl malonate</b>
Deliveries	6 times/year
Specimens	2 human sera or plasmas
	<b>e-scheme</b>
<b>2651</b>	<b>Nasal swab cells See also Sputum cells</b>
Delivery	December
Specimens	4 digital pictures of MGG and methylene eosin stained specimens on Labquality's website
Examinations	Eosinophils, neutrophils
Please note	<u>A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.</u>

	<b>e-scheme</b>
<b>2652</b>	<b>Sputum cells See also Nasal swab cells</b>
Delivery	December
Specimens	4 digital pictures of MGG and methylene eosin stained specimens on Labquality's website
Examinations	Eosinophils, neutrophils
Please note	<u>A participant sends the results via Labquality's website. The report releasing date will be announced on the data input site.</u>
<b>2640</b>	<b>Synovial fluid crystals</b>
Delivery	May
Specimens	3 slides prepared from patient samples
Examinations	Sodium urate monohydrate and calcium pyrophosphate dihydrate crystals
	
<b>2410</b>	<b>Therapeutic drugs (Drug monitoring)</b>
<b>2411</b>	<b>Therapeutic drugs (Drug monitoring) and hydroxycarbazepine</b>
Please note	<u>We can guarantee participation only for laboratories that have ordered the survey by the end of preceding November</u>
Deliveries	March, May, August, November
Specimens	2 human sera à 2 x 5 mL; Hydroxycarbazepine: 2 sera à ~1 mL
Examinations	Amikasin, amitriptyline, carbamazepine, carbamazepine free, cyclosporine, digoxin, disopyramide, ethosuximide, flecainide, gentamycin, hydroxycarbazepine (separate specimen), lidocaine, lithium, methotrexate, NAPA, netilmycin, nortriptyline, paracetamol (acetaminophen), phenobarbital, phenytoin, phenytoin free, primidone, procainamide, quinidine, salicylate, theophylline, tobramycin, tricyclics, valproic acid, valproic acid free and vancomycin
	<b>Def</b>
<b>2480</b>	<b>Vitamin A, E and D metabolites</b>
<b>2481</b>	<b>Extra sample 5 mL</b>
Deliveries	April, November
Specimens	2 liquid human sera à 1 mL
Examinations	Vitamin A, vitamin E, 25(OH)D, 1,25(OH)2D
Please note	<u>Target values for D vitamin metabolites will be given</u>

## Instruments

Inquiries +358 9 8566 8200, info@labquality.fi

### 8210 Residues of detergents and disinfectants, detection

Deliveries January, March, May, July, September, November  
Samples One control sample, 1–4 test samples  
Please note Participants will receive instructions and sampling device which is returned for analysis. The scheme is planned to detect residues of detergents and disinfectants in rinsing water and on surfaces using test which is based on light emission of Bacteria *Vibrio fischeri* (NRRL B-1177).

### 8100 Wavelength scale accuracy

Delivery April  
Samples Wavelength indicator solution  
Examinations Absorbances at six different peaks

### 8110 Wavelength accuracy at 340 nm

Delivery April  
Samples Wavelength indicator solutions  
Examinations Absorbance at 340 nm

### 8130 Linearity and diffused light at 340 nm

### 8140 Linearity and diffused light at 405 nm

### 8145 Linearity and diffused light at 540 nm

Suitable also for ELISA readers

Delivery October  
Samples Colour solution series for above-mentioned wavelengths  
Examinations Absorbances

### Ref Co [DEKS]

### 8814 ELISA reader photometry control

Delivery Circulation starts in March.  
Samples An ELISA plate with a built-in gray glass filter  
Examinations Control for the absorbance scale in ELISA reader  
Further details Absorbance traceable to NIST

## Microbiology

### Bacterial Serology

Inquiries +358 9 8566 8200, info@labquality.fi

Specimens in the Microbiology section may contain pathogens. The specimens must be handled with extreme care and be dealt with and disposed of only by trained laboratory personnel. Preliminary results are available at Labquality's website in 2–5 working days after the closing date.

### 5840 Antistreptolysin

Deliveries February, May, August, November  
Specimens 2 liquid human sera or plasma à ~0.4 mL  
Examinations Qualitative and quantitative ASO

### 5950 *Bordetella pertussis*, antibodies

Deliveries January, April, August, November  
Specimens 2 liquid human sera à ~0.4 mL  
Examinations *B. pertussis* IgA, IgG, IgM antibodies, clinical interpretation

### 5960 *Borrelia burgdorferi*, antibodies

European origin

Deliveries January, April, August, November  
Specimens 2 liquid human sera or plasma à ~0.5 mL  
Examinations *Borrelia burgdorferi* IgG, IgM and total antibodies, clinical interpretation

### 5620 *Chlamydia pneumoniae*, antibodies

Deliveries January, April, August, November  
Specimens 2 liquid human sera à ~0.3 mL  
Examinations *C. pneumoniae* IgA, IgG, IgM antibodies, clinical interpretation

### 5970 Enteropathogens, antibodies

Deliveries February, May, September, December  
Specimens 2 liquid human sera or plasma à ~0.6 mL  
Examinations Salmonella and yersinia IgA, IgG, IgM and total antibodies; clinical interpretation

**5860**      ***Helicobacter pylori*, antibodies**

Deliveries      March, June, September, December  
Specimens      2 liquid human sera à ~0.4 mL  
Examinations      *H. pylori* IgA, IgG and total antibodies, quantitative and qualitative tests, clinical interpretation

**5980**      ***Mycoplasma pneumoniae*, antibodies**

Deliveries      February, May, September, November  
Specimens      2 liquid human sera à ~0.3 mL  
Examinations      *M. pneumoniae* IgG, IgM and total antibodies, clinical interpretation

**5880**      **Syphilis serology**

Deliveries      February, June, October, December  
Specimens      2 liquid human sera or plasma à ~0.6 mL  
Examinations      Cardiolipin, specific *Treponema pallidum* antibody tests or corresponding tests, clinical interpretation

## Microbiology

### Bacteriology and Mycology

Inquiries      +358 9 8566 8200, info@labquality.fi

Specimens in the Microbiology section may contain pathogens. The specimens must be handled with extreme care and be dealt with and disposed of only by trained laboratory personnel.

Preliminary results are available at Labquality's website in 2–5 working days after the closing date. The report releasing date of e-schemes will be announced on the data input site.

The surveys with text "Delivery only via local distributor" in the programme will be delivered only via national distributors in Denmark, Estonia, Great Britain, Greece, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden and Turkey, and if the number of participants per survey and per distributor is at least 5.

**5050**      **e-scheme**  
**Bacteriological staining, direct (clinical samples)**

Digital pictures

Deliveries      April, October  
Specimens      3 digital pictures  
Examinations      Interpretation of digital pictures taken from direct bacteriological staining of clinical samples  
Please note      A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.



**5100 Blood culture**

Deliveries March, May, October, December  
\*Delivery only via local distributor

Specimens 2 lyophilized specimens, brief case histories will be given. Fresh blood is needed in the specimen preparation. The specimens intended for susceptibility testing may include both international quality control strains and clinical strains like VRE, MRSA etc.

Examinations Culture, identification, antimicrobial susceptibility

**5101 Blood culture, screening**

Deliveries March, May, October, December  
\*Delivery only via local distributor

Specimens 2 lyophilized specimens, brief case histories will be given. Fresh blood is needed in the specimen preparation.

Examinations Culture, preliminary identification using Gram stain.  
Also suitable for stem cell banks, which only screen for possible growth.

**5150 Cerebrospinal fluid, culture, screening**

Deliveries March, May, September, December  
\* Delivery only via local distributor

Specimens 2 lyophilized specimens, brief case histories will be given.

Examinations Culture, preliminary identification using Gram stain.  
Also suitable for laboratories performing identification.

**5610 Chlamydia trachomatis, nucleic acid amplification method**

Deliveries March, June, September, December

Specimens 3 swab specimens

Examinations Detection of *Chlamydia trachomatis* nucleic acid

**5200 Clostridium difficile, culture and toxin detection**

Deliveries March, May, August, November  
\* Delivery only via local distributor

Specimens 2 lyophilized mixtures of bacteria

Examinations Culture, enterotoxin A, cytotoxin B

**5190 Faecal culture**

Deliveries April, June, October, December  
\* Delivery only via local distributor

Specimens 2 lyophilized mixtures of bacteria; brief case histories will be given


Examinations Culture and identification  
 Pathogens included: EHEC, Campylobacter, Salmonella, Shigella and Yersinia

**5260 Fungal culture**

Deliveries March, May, September, December  
\* Delivery only via local distributor

Specimens 3 lyophilized specimens; brief case histories will be given. The specimens include moulds, dermatophytes and yeasts.

Examinations Culture and identification.  
 Antimicrobial susceptibility of yeast strains


 **5080 General Bacteriology 1 (aerobes and anaerobes)**

General Bacteriology 1 also includes General Bacteriology 2

Deliveries March, May, September, December  
\* Delivery only via local distributor

Specimens 4 lyophilized mixtures of bacteria; both pathogens and normal flora. The specimens intended for susceptibility testing may include both international quality control strains and clinical strains like VRE, MRSA etc. Brief case histories will be given.

Examinations Isolation of pathogens and antimicrobial susceptibility testing

 **5081 General Bacteriology 2 (aerobes)**

General Bacteriology 1 also includes General Bacteriology 2

Deliveries March, May, September, December  
\* Delivery only via local distributor

Specimens 2 lyophilized mixtures of bacteria; both pathogens and normal flora. The specimens intended for susceptibility testing may include both international quality control strains and clinical strains like VRE, MRSA etc. Brief case histories will be given.

Examinations Isolation of pathogens and antimicrobial susceptibility testing

**5040 Gram stain, colonies**

Deliveries January, April, July, October  
\* Delivery only via local distributor

Specimens 3 air-dried, unfixed microbe suspensions on a slide

Examinations Staining and microscopy

<b>5041</b>	<b>Gram stain, blood culture methods without carbon</b>
<b>5042</b>	<b>Gram stain, blood culture methods with carbon</b>
Deliveries	January, April, July, October <u>* Delivery only via local distributor</u>
Specimens	2–3 air-dried microbe suspensions on slides
Examinations	Staining and microscopy
Specimens	3 lyophilized faecal specimens
Examinations	Antigen detection
<b>5596</b>	<b><i>Helicobacter pylori</i>, antigen detection in faeces</b>
Deliveries	March, June, September, December <u>* Delivery only via local distributor</u>
Specimens	3 lyophilized faecal specimens
Examinations	Antigen detection
	<b>NEW</b>
<b>5597</b>	<b><i>Legionella</i>, antigen detection in urine</b>
Deliveries	March, May, September, December
Specimens	3 simulated urine specimens
Examinations	Antigen detection
<b>5220</b>	<b>Mycobacterial culture and smear</b>
Deliveries	March, June, September, December <u>* Delivery only via local distributor</u>
Specimens	2 lyophilized specimens and 2 fixed smears on slides
Examinations	Detection of <i>Mycobacterium tuberculosis</i> and atypical mycobacteria: culture, acid-fast staining and microscopy
<b>5240</b>	<b>Mycobacterial smear</b>
Deliveries	March, June, September, December <u>* Delivery only via local distributor</u>
Specimens	2 fixed smears on slides
Examinations	Acid-fast staining and microscopy
<b>5120</b>	<b><i>Neisseria gonorrhoeae</i> (Gc), culture</b>
Deliveries	April, June, September, December <u>* Delivery only via local distributor</u>
Specimens	2 lyophilized mixtures of microbes
Examinations	Culture and identification. <u>Also suitable for laboratories performing preliminary screening.</u>

<b>5591</b>	<b><i>Neisseria gonorrhoeae</i> (Gc), nucleic acid amplification method</b>
Deliveries	April, June, September, December
Specimens	3 swab specimens
Examinations	Detection of <i>N. gonorrhoeae</i> nucleic acid
<b>5180</b>	<b>Salmonella culture</b>
	<u>Faecal culture (5190) also includes Salmonella culture</u>
Deliveries	April, June, October, December <u>* Delivery only via local distributor</u>
Specimens	2 lyophilized mixtures of bacteria; brief case histories will be given
Examinations	Culture and identification
<b>5595</b>	<b>Streptococcus (group A), antigen detection</b>
Deliveries	March, May, September, December
Specimens	3 simulated pharyngeal specimens
Examinations	Antigen detection
	<b>NEW</b>
<b>5598</b>	<b><i>Streptococcus pneumoniae</i>, antigen detection in urine</b>
Deliveries	March, May, September, December
Specimens	3 simulated urine specimens
Examinations	Antigen detection
<b>5140</b>	<b>Throat streptococcal culture, screening and identification</b>
Deliveries	March, May, August, November <u>* Delivery only via local distributor</u>
Specimens	3 lyophilized mixtures of bacteria
Examinations	Culture and identification
<b>5060</b>	<b>Urine culture, quantitative, screening</b>
<b>5065</b>	<b>Urine culture, quantitative, screening, identification and susceptibility</b>
Deliveries	March, June, September, December <u>* Delivery only via local distributor</u>
Specimens	2 lyophilized specimens and dilutor; brief case histories will be given. The specimens intended for susceptibility testing may include both international quality control strains and clinical strains like VRE, MRSA etc.
Examinations	5060: Screening 5065: Culture, identification and antimicrobial susceptibility testing

# Microbiology

## Parasitology

Inquiries +358 9 8566 8200, info@labquality.fi

Specimens in the Microbiology section may contain pathogens. The specimens must be handled with extreme care and be dealt with and disposed of only by trained laboratory personnel.

Preliminary results are available at Labquality's website in 2–5 working days after the closing date. The report releasing date of e-schemes will be announced on the data input site.

### 5460 Parasites in blood

Giemsa stain

### 5461 Parasites in blood

May-Grünwald-Giemsa stain

Deliveries February, May, August, November  
Specimens 2 Giemsa stained smears or 2 MGG stained smears or both of them; brief case histories will be given  
Examinations Screening and identification of malaria plasmodia and other blood parasites

### 5440 Parasites in faeces

Deliveries February, May, August, November  
Specimens 3 stool specimens in formalin; brief case histories will be given  
Examinations Screening and identification of intestinal parasites (ova and parasites)

#### e-scheme

### 5420 Toxoplasma antibodies

Deliveries February, May, August, November  
Specimens 3 liquid human plasma à 0.7 mL; brief case histories will be given. Each plasma specimen originates from one human donor.  
Examinations IgA, IgG and IgM antibodies, avidity and clinical interpretation  
Please note A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

# Microbiology

## Virology

Inquiries +358 9 8566 8200, info@labquality.fi

Specimens in the Microbiology section may contain pathogens. The specimens must be handled with extreme care and be dealt with and disposed of only by trained laboratory personnel.

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#### e-scheme

### 5650 Cytomegalovirus, antibodies

Deliveries February, May, September, December  
Specimens 3 liquid human plasma à  $\geq 0.7$  mL  
Each specimen batch originates from one human donor.  
Examinations Cytomegalovirus IgG, IgM and total antibodies, IgG avidity and clinical interpretation  
Please note A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.



### 5640 EBV mononucleosis, antibodies, specimen volume 0.5 mL

### 5641 EBV mononucleosis, antibodies, specimen volume 1.5 mL

Please choose the specimen volume according to your test selection

Deliveries February, May, September, December  
Specimens 3 liquid human plasma à 0.5 mL or 1.5 mL  
Each specimen batch originates from one human donor  
Examinations EBNAAb, EBVAb, EBVAbG, EBVAbM, EBVAvi, MonAb  
Heterophile and specific antibodies; clinical interpretation

**5092** **e-scheme**  
**Hepatitis A antibodies**

Deliveries March, June, September, December  
\* Delivery only via local distributor

Specimens 3 liquid human plasma à ≥ 0.7 mL  
Each plasma specimen originates from one human donor

Examinations HAVAb, HAVAbM, HAVAbG and clinical interpretation

Please note A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

**5094** **e-scheme**  
**Hepatitis B and C**  
specimen volume 0.6 mL

**5095** **Hepatitis B and C**  
specimen volume 1.2 mL

**5096** **Hepatitis B and C;**  
specimen volume 2.0 mL

Please choose the specimen volume according to your test selection

Deliveries March, June, September, December  
\* Delivery only via local distributor

Specimens 3 liquid human plasmas 0.6 mL, 1.2 mL or 2.0 mL  
Each plasma specimen originates from one human donor

Examinations HBcAb, HBcAbM, HBeAb, HBeAg, HBsAb (qual), HBsAg, HCVAb, HCVAbCt and clinical interpretation

**5093** **e-scheme**  
**Hepatitis B, s-antigen antibodies, quantitative**

Deliveries January, April, July, October  
\* Delivery only via local distributor

Specimens 2 liquid human plasmas à ≥ 0.7 mL

Examinations HBsAg (anti-HBs), quantitative

**5555** **Herpes simplex 1 and 2, antibodies**

Deliveries February, May, August, November

Specimens 3 liquid human plasma à ≥ 0.5 mL  
Each specimen batch originates from one human donor

Examinations HSVAb, HSVAbG (qualitative and quantitative), HSVAbM, HSV1AbG, HSV2AbG

**5091** **e-scheme**  
**HI virus, antibodies**

Deliveries March, June, September, December  
\* Delivery only via local distributor

Specimens 4 liquid human plasma à ≥ 0.7 mL

Examinations HIVAgAb (combo), HIVAb, HIVAbCt; primary and confirmatory tests  
Positive specimens may include HIV-1 or HIV-2

Please note A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

**5090** **NEW e-scheme**  
**Hi virus, antibodies, point of care**

The scheme is designed only for HIVAb and HIVAgAb point of care tests (cassette, strip etc..). The results are accepted only if tested using point of care HIVAb or HIVAgAb tests. Please note that there is a separate scheme for HI virus antibodies (5091) which includes also the confirmatory tests and clinical interpretations.

Deliveries March, June, September, December  
\* Delivery only via local distributor

Specimens 3-4 liquid human plasma à ≥ 0.5 mL

Examinations HIVAb and HIVAgAb primary tests (POC)

Please note A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

**5089** **NEW e-scheme**  
**Human T-cell lymphotropic virus, antibodies**

Deliveries March, June, September, December  
\* Delivery only via local distributor

Specimens 3 liquid human plasma à ≥ 0.5 mL

Examination HTLVAb; primary and confirmatory tests.  
Positive specimens may include HTLV-1 or HTLV-2.

Please note A participant enters the results via Labquality's website. The report releasing date will be announced on the data input site.

**5671** **Influenza virus A+B, detection**

Deliveries January, November  
*\* Delivery only via local distributor*

Specimens 3 artificial specimens à ≥ 0.5 mL

Examinations InfAAg, InfABA<sub>g</sub>, InfB<sub>Ag</sub>, InfA NAT, InfB NAT

**5668** **Measles virus, antibodies**

Deliveries January, April, July, October

Specimens 3 liquid human plasma à ≥ 0.5 mL  
Each plasma specimen originates from one human donor

Examinations Measles virus IgG and IgM antibodies and clinical interpretation

**5669** **Mumps virus, antibodies**

Deliveries: January, April, July, October

Specimens: 3 liquid human plasma à ≥ 0.5 mL.  
Each plasma specimen originates from one human donor

Examinations MumpsAb, MumpsAbG, MumpsAbM and clinical interpretation

**5660** **Parvovirus, antibodies**

Deliveries February, May, August, November

Specimens 3 liquid human sera à ≥ 0.2 mL

Examinations Parvovirus IgG, IgM and total antibodies, IgG avidity and clinical interpretation

**5560** **Puumala virus, antibodies (Nephropathia epidemica)**

Deliveries March, June, October, December

Specimens 3 liquid human plasma or sera à ≥ 0.3 mL; brief case histories will be given

Examinations Puumala virus IgG, IgM and total antibodies, POC tests and specific antibodies, IgG avidity and clinical interpretation

**5098** **Rotavirus and adenovirus, antigen detection**

Deliveries March, June, September, December  
*\* Delivery only via local distributor*

Specimens 3 faecal suspensions

Examinations Direct rotavirus and adenovirus antigen detection

**5672** **RS virus, detection**

Deliveries January, November  
*\* Delivery only via local distributor*

Specimens 3 artificial specimens ≥ 0.5 mL

Examinations RSV NAT, RSVAg

**5667** **Rubella virus, antibodies**

Deliveries January, April, July, October

Specimens 3 liquid human plasma à ≥ 0.5 mL  
Each plasma specimen originates from one human donor

Examinations Rubella virus IgG and IgM antibodies, IgG avidity and clinical interpretation

**5099** **Tick-borne encephalitis virus, antibodies**

Deliveries: February, May, August, November

Specimens: 3 human serum or plasmas à 0.5 mL, brief case histories will be given

Examinations: TBEAb, TBEAbG, TBEAbM

**5665** **Varicella-zoster virus, antibodies**

Deliveries February, May, August, November

Specimens 3 liquid human plasma or sera à ≥ 0.5 mL  
Each specimen batch originates from one human donor

Examinations Varicella zoster IgG, IgM and total antibodies and clinical interpretation



## Pathology

### Diagnostics

Inquiries +358 9 8566 8200, info@labquality.fi

#### 6542 Histopathology

Deliveries May, November  
Specimens Participants receive 5–8 slides, brief case histories and instructions.

Further details **1. Routine pathology** (miscellaneous tissues of biopsy and surgical pathology)  
**2. Soft tissue tumours**  
The participants are asked to give the histopathological diagnosis and determine the grade of differentiation in malignant tumour cases. It is possible to send 1–5 individual results from each laboratory. Final reports will contain the distribution of diagnoses, diagnostic agreement, the organizer's interpretation and clinical follow-up data.

#### 6700 Clinical cytology

Please note Only via internet. Virtual microscopy is also available. Demonstration of virtual microscopy is at [www.labquality.fi](http://www.labquality.fi).

Deliveries March, October  
Specimens Digital and virtual images of Papanicolaou stained slides with case histories will be presented at [www.labquality.fi](http://www.labquality.fi). Participants will be given detailed instructions. The specimens will be selected from routine cytological material. The images from 5–6 cases will be taken from representative areas. Virtual specimens will be prepared using the scanner microscope.

Further details **1. Gynaecological cytology**  
The scheme assesses diagnostics of cellular atypias in cervico-vaginal cytological specimens. Each case is to be assigned to the categories of the Bethesda System and the classes of Papanicolaou (0–5).  
**2. Non-gynaecological cytology** (exfoliative cytology and fine needle aspiration)  
The scheme assesses diagnostics of cellular atypias in samples taken from non-gynaecological locations. It is possible to enter 1–5 individual results from each laboratory. Final report will include distribution of diagnoses, diagnostic agreement, the organizer's interpretation and clinical follow-up data.

## Pathology

### Technology

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#### 6600 Immunochemical staining methods

Deliveries April, October  
Specimens Participants receive paraffin embedded tissue on 3-5 slides from different tissue blocks or from one multiblock. One set of stained sections will be returned to Labquality.

Examinations **1. Pancytokeratin, cytokeratin 7, cytokeratin 20, CDX-2**  
**2. CD3, CD20, CD117, CD138**  
A two or three-member board will evaluate the slides, giving scores from 0 to 5. The scores of the laboratory's own stained slides, mean scores and comments on stainings and protocols used are included in the final report.

#### 6543 Technology

Deliveries March, September  
Specimens Participants receive paraffin sections or smears or slides to be stained. One set of stained slides from both stainings will be returned to Labquality.

Further details **1. Haematoxylin-eosin stain, Papanicolaou stain**  
**2. Iron stain, Alcian Blue-PAS stain**  
Final report will contain scores of the staining quality with expert comments and the distribution of scores from each participant laboratory.



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